

YAKOVLEV, V.G.; OZEROVA, G.N.

Physicochemical constants of milk fat in Ala-Tau cattle. Trudy
Inst.zool.i paraz.AN Kir.SSR no.4:173-179 '55. (MLRA 10:5)
(Milk--Analysis and examination)

USSR/Farm Animals - Large Horned Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83340

Author : Odyets, R.N., Yakovlev, V.G., Dokunin, A.F.,
Mmel'nitskaya, Z.D.

Inst : Institute of Zoology and Parasitology, AS KirgSSR.

Title : The Effect of Sugar Beets upon Nitrogen, Calcium, and
Phosphorus Metabolisms in Milch Cows.

Orig Pub : Tr. In-ta zool. i parazitol. AN KirgSSR, 1957, vyp. 6,
231-240.

Abstract : In addition to their usual diet, Alatauian breed cows re-
ceived 40-45 kg of fodder beets in the first series of
tests. In the second series of tests they received in ad-
dition to their usual diet 20 kg of sugar beets (5 kg 4
times daily). When sugar beets were fed to the animals,
the following blood indicators became higher: the water

Card 1/2

AFANAS'YEV, P.V.; YAKOVLEV, V.G.; FRENKEL', G.L.; KHMEL'NITSKAYA, Z.D.

Biochemistry of thermal traumas. Izv. AN Kir. SSR no.5:121-131
'58. (MIRA 11:7)
(Cold--Physiological effect) (Heat--Physiological effect)

YAKOVLEV, V.G.; DRANISHNIKOVA, L.M.

Role of the lungs in the synthesis of fatty acids. Izv. AN Kir. SSR
no.6:131-136 '58. (MIRA 11:12)
(LUNGS) (ACIDS, FATTY)

YAKOVLEV, V.G. OZIEROVA, G.N.

Changes in the amino acid composition of the proteins in cow's
milk during lactation. Trudy Inst.zool.i paraz.AN Kir.SSR
no.7:3-8 59. (MIRA 13:4)
(Milk) (Amino acids)

YAKOVLEV, V.G.; OZEROVA, G.N.; MISHCHENKO, I.K.

Role of insulin and adrenaline in the amino acid metabolism
of the mammary gland. Izv. AN Kir. SSR. Ser. biol. nauk 1 no.1:
37-63 '59. (MIRA 13:6)
(INSULIN) (ADRENALINE) (AMINO ACIDS)

YAKOVLEV, V.G.; GOROV, G.G.

Air-driven perfusion pump. Izv. AN Kir. SSR. Ser. biol. nauk 1
no. 1: 151-153 '59. (MIRA 13:6)
(COPPER METABOLISM) (COWS)

GIMMERIKH, F.I.; YAKOVLEV, V.G., otv.red.; VOZHEYKO, I.V., red.izd-va;
ANOKHINA, M.G., tekhn.red.

[Regulation of oxygen output by the blood] O regulatsii otdachi
kislороda krov'iu. Frunze, Akad.nauk Kirgizskoi SSR, 1960. 105 p.
(MIRA 13:12)

(BLOOD--OXYGEN CONTENT)

YAKOVLEV, Y.G.

Precursors of milk proteins and their biosynthesis. Izv. AN Kir.
SSR Ser. biol. nauk 2 no. 5: 5-28 '60. (MIRA 14:6)
(LACTATION) (PROTEINS)

YAKOVLEV, V.G., (USSR)

"Hormonal Regulation of Protein Metabolism of Mammary Gland."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow,
10-16 Aug 1961.

KARAKHEYEV, Kurman-Gali; YAKOVLEV, V.G., otv. red.; POPOVA, M.G.,
tekhn. red.

[Growth of science and learning in Soviet Kirghizistan]
Razvitie nauki v Sovetskom Kirgizstane. Frunze, Izd-vo
Akad. nauk Kirgizskoi SSR, 1962. 124 p. (MIRA 15:9)

1. Prezident Akademii nauk Kirgizskoy SSR (for Karakeyev).
2. Chlen-korrespondent Akademii nauk Kirgizskoy SSR (for Yakovlev).

(Kirghizistan--Research)

YAKOVLEV, V.G.; DRANISHNIKOVA, L.M.

Role of hormonal factors in the metabolism of mammary glands.
Izv. AN Kir. SSR. Ser. biol. nauk 3 no.2:5-16 '61. (MIRA 14:12)
(MAMMARY GLANDS) (HORMONES)
(METABOLISM)

OZEROVA, G.N.; YAKOVLEV, V.G.

Role of some humoral substances in the absorption and secretion of
free amino acids into the blood by mammary glands. Izv. AN Kir.
SSR. Ser. biol. nauk 3 no.2:17-23 '61. (MIRA 14:12)
(LACTATION) (HORMONES) (AMINO ACID METABOLISM)

YAKOVLEV, V.G.; STEPANENKO, G.D.

Role of formed elements of the blood in protein metabolism.
Izv. AN Kir. SSR. biol. nauk 3 no.2:25-31 '61. (MIRA 14:12)
(BLOOD CELLS) (PROTEIN METABOLISM)

~~YAKOVLEV~~, Vladimir Georgiyevich; ODYNETS, R.N., otv. red.; SEMIKINA,
T.F., red.izd-va; ANOKHINA, M.G., tekhn. red.

[Lactation biochemistry] Biokhimiia laktatsii. Frunze, Izd-vo
Akad. nauk Kirgizskoi SSR, 1962. 229 p. (MIRA 16:2)
(LACTATION) (BIOCHEMISTRY)

AFANAS'YEV, P.V.; YAKOVLEV, V.G.

Some problems of the theory of spot seeding. Izv. AN SSSR
Ser. biol. 28 no.4:594-604 J1-Ag'63 (MIRA 16:11)

1. Institute of Biological Chemistry, Academy of Sciences of
the U.S.S.R., Moscow.

*

~~YAKOVLEV~~, V. G.

PHASE I BOOK EXPLOITATION

SOV/4118

Khimicheskaya zashchita organizma ot ioniziruyushchikh izlucheni (Chemical Protection of the Organism From Ionizing Radiation) Moscow, Atomizdat, 1960. 151 p. Errata slip inserted. 6,000 copies printed.

Ed. (Title page): V.S. Balabukh, Professor; Ed. (Inside book): A.I. Zavodchikova; Tech. Ed.: N.A. Vlasova.

PURPOSE: This book is intended for chemists doing research on means of chemical protection and on complexing agents, and for biologists and other specialists working on problems in radiobiology.

COVERAGE: This collection of articles reviews the present state of the problem of chemical protection from ionization radiation and contains experimental data on the synthesis and biological testing of the protective properties of a number of chemical compounds (the aminothiols and pyrimidine derivatives). Results of experimental investigation on the elimination of radioactive isotopes from the organism are presented and the characteristics of the state of certain radioactive isotopes in the blood and in bone tissue are noted.

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Chemical Protection of the Organism (Cont.)

SOV/4118

Attention is given to explaining the action mechanism of protective substances. The articles discuss in the light of certain radiobiological and biophysical hypotheses possible ways of protecting the biosubstructure from the injurious effects of ionizing radiation. The effectiveness of complexing agents which induce radioactive isotopes to combine and be eliminated from the organism is evaluated on the basis of physicochemical data and biological experiments. No personalities are mentioned. Soviet and non-Soviet sources follow each article.

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PART I. CHEMICAL PROTECTION FROM IONIZING RADIATIONS

Balabukha, V.S. Present State of Chemical Protection From Penetrating Radiations

7

Yakovlev, V.G. Relation Between the Structure and Properties of Certain Sulfur Compounds and Their Protective Action Against Penetrating Radiations

14

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Chemical Protection of the Organism (Cont.)

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- Yakovlev, V.G., and L.S. Isupova. Mechanism of the Protective Action of Certain Thiol Compounds 41
- Isupova, L.S. Effect of Protective Doses of L-Cysteine on the Level of Nonalbuminous Sulfhydryl Groups in the tissues of rats exposed to X-Radiation 55
- Yakovlev, V.G., and L.S. Isupova. Effect of Protective Substances on the Albuminous SH-Groups in the Organs and Tissues of Healthy and Irradiated Animals 62
- Yakovlev, V.G., and V.S. Mashtakov. Synthesis and Testing of the Protective Action of a Number of Sulfur Compounds and Coumarin Derivatives 72
- Romantsev, Ye.F., and Z.I. Zhulanova. Effect of β -Mercaptoethylamine on the Formation of Organic Peroxides in the Irradiated Organism 82

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3/3

AFANAS'YEV, P.V.; YAKOVLEV, V.G.; DENISOVA, I.S.

Biochemistry of radiation injury. Izv.AN Kir.SSR. Ser.biol.nauk
1 no.1:65-75 '59. (MIRA 13:6)
(RADIOACTIVITY--PHYSIOLOGICAL EFFECT)

YAKOVLEV, V.G.
DOMSHIYAK, M.P.; IVANOV, I.I.; BELCISOVA, O.I.; YAKOVLEV, V.G.

Biological radiation protection in experimental radiotherapy of
tumors. Med.rad. 2 no.3:47-52 My-Je '57. (MLRA 10:10)

(RADIATION PROTECTION, exper.

by cysteine & sodium cyanate in radiother. of exper.
tumors in rats)

(CYSTEINE, eff.

in radiation protection in radiother. of exper. tumors
in rats, with sodium cyanate)

(CYANATES, eff.

sodium cyanate in radiation protection in radiother. of
exper. tumors in rats, with cysteine)

YAKOVLEV, V.G., IVANOV, I.I.

Chemical protection of animals from the effect of roentgen rays
[with summary in English]. Med.rad. 3 no.5:14-20 S-O '58 (MIRA 11:12)
(RADIATION PROTECTION,
by cyanides & cysteine in rats (Rus))
(CYANIDES, eff.
radiation protection in rats (Rus))
(CYSTEINE, eff.
same (Rus))

ISUPDVA, L.S.; YAKOVLEV, V.G.

Amount of nonprotein sulfhydryl groups in the liver and spleen
of white rats irradiated with X rays with preliminary administration
of protective doses of cysteine. Med. rad. 5 no.9:38-43 S '60.
(MIRA 13:12)

(CYSTEINE)
(MERCAPTO COMPOUNDS)

(RADIATION--PHYSIOLOGICAL EFFECT)
(LIVER) (SPLEEN)

ACCESSION NR: AP4027974

S/0205/64/004/002/0244/0247

AUTHOR: Yakovlev, V. G.; Isupova, L. S.

TITLE: Interaction of tissue proteins with radioprotectors containing sulfur

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 244-247

TOPIC TAGS: radioprotector, cysteine, cysteine n-propyl ether, beta-mercaptopropylamine, azidothioformic acid, diethylthiocarbamate, S³⁵ tagging, liver tissue protein, spleen tissue protein, protein radioactivity, disulfide bond, radioprotective action mechanism

ABSTRACT: The capacity of radioprotective substances containing sulfur to combine with tissue proteins of the liver and spleen was investigated in vivo in white mice. For these experiments several radioprotectors were synthesized and tagged with radioactive sulfur S³⁵: cysteine, cysteine n-propyl ether, beta-mercaptopropylamine, azidothioformic acid, and diethylthiocarbamate. These preparations were administered intraperitoneally in optimal doses to the experimental animals. Animals were decapitated 30 min later. Liver and spleen were prepared for separation of dry protein. Radioactivity of

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Card

ACCESSION NR: AP4027974

air-dried protein was measured in 10-mg portions uniformly distributed over a 2-cm² area. Air-dried protein was reduced by a modified Kolthoff method using a copper-ammonia-sulfite reagent to prove that the radioprotector is linked to the proteins by disulfide bonds. Findings show that cysteine, cysteine n-propyl ether, and beta-mercaptopyrrolamine combine with the proteins by means of disulfide bonds. But radioprotectors containing a dithioformate group as in azidothioformic acid do not form strong bonds with tissue proteins. Apparently the radioprotective action mechanism of these substances is not related to the formation of mixed disulfide bonds and is accomplished by some other means. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 19Feb63

DATE ACQ: 28Apr64

SUB CODE: AM

NO REF SOV: 006

ENCL: 00

OTHER: 003

Card 2/2

L 7011-65 EAG(j)/EWT(m) Pa-4/Pb-4 AFWL/BSL/AMD/SSD/AS(mp)-2/
RAEM(t)

ACCESSION NR: AP4043213

S/0205/64/004/004/0516/0520

AUTHOR: Isupova, L. S.; Yakovlev, V. G. B

TITLE: Some observations of the effect of oxygen on the action of
irradiation of rats 19

SOURCE: Radiobiologiya, v. 4, no. 4, 1964, 516-520

TOPIC TAGS: irradiation, oxygen effect, SH group, liver tissue,
spleen tissue, oxygen atmosphere, radioprotection, cysteine, radio-
biology

ABSTRACT: A series of experiments has been performed in order to
clarify the role of ambient oxygen in biological reactions to irra-
diation. It was established first that exposure of rats to all-oxygen
atmospheres for periods from 30 min to 12 hr does materially affect
the nonprotein SH-group content of liver and spleen tissues. Secondly,
it was established that the rise in the nonprotein SH-group content
of spleen tissues due to the injection of a sulfhydryl radioprotector
(cysteine) was identical for short-term exposure to normal and to
oxygen atmospheres. Thirdly, it was established that irradiation of

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L 7011-65

ACCESSION NR: AP4043213

cystein-protected rats was not significantly affected by exposure for 30 min to an all-oxygen atmosphere. This means that intensification of oxydation of nonprotein SH-groups does not take place in tissues of irradiated rats in an oxygen atmosphere. When rats without chemical protection were exposed to gamma-ray doses of 750 r, the dosage proved 100% fatal for rats in an oxygen atmosphere as well as those in a normal atmosphere. When rats were administered cystein 20 min before irradiation, the percentage surviving in a normal atmosphere was somewhat higher than those in an oxygen atmosphere, but the difference cannot be considered statistically significant. This indicates that cysteine does not lose its radioprotective properties when the animals are irradiated in an all-oxygen atmosphere. However, a reduction of oxygen in the atmosphere has a certain protective value. Rats exposed to doses of 750 r, which proved 100% lethal when the animals were in a normal or an all-oxygen atmosphere, were only 33% lethal in a 7%-oxygen atmosphere and 100% nonlethal in a 5%-oxygen atmosphere. On the other hand, the increased radiosensitivity to oxygen atmospheres under excess pressure can be partially accounted for by a change in the physiological condition of the animals. Orig. art. has: 4 tables and 1 figure.

Card 2/3

L 7011-65

ACCESSION NR: AP4043213

ASSOCIATION: none

SUBMITTED: 25Dec62

ATD PRESS: 3103

ENCL: 00

SUB CODE: LS

NO REF SOV: 009

OTHER: 000

Card 3/3

YAKOVLEV, V.G.

Mechanism of radiosensibilizing action of metals-biocatalysts.
Radiobiologia 4 no.5:656-659 '64.

(MIRA 18:4)

L 55039-65 EWG(j)/ENT(m)

ACCESSION NR: AP5014301

UR/0241/65/010/006/0047/0061

615.778.71-03:616-001.28-084+616-001.28-085.

778.71-039.71

AUTHOR: Yakovlev, V. G.

TITLE: Transformation of "potential radioprotectors" into active protective agents in animals

SOURCE: Meditsinskaya radiologiya, v. 10, no. 6, 1965, 47-61

TOPIC TAGS: radiation protection, sulfur compound, aminoethylisothiuron, trans-deamination

ABSTRACT: The author reviews the literature on efforts to find chemical substances which would change in the body into sources of protection against radiation and would not produce side effects or toxicity. Attention is focused on sulfur-containing compounds which have been comparatively effective in this respect. Intramolecular transdeamination of isothiuronium compounds, transformation of disulfides, splitting of thioesters, hydrolysis, oxidation, and reaction of complex thioesters are discussed. The following trends of research emerge from the data on sulfur-con-

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L 55039-65

ACCESSION NR: AP5014301

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taining "potential radioprotectors": (a) modification of the chemical structure of substances so that they may be transformed in a given direction; (b) chemical synthesis or isolation from natural materials of substances for which methods of biochemical transformation are known; (c) minor structural changes in natural compounds by introducing new or altering existing functional chemical groups. Besides intramolecular regrouping, hydrolysis, reduction, etc., other more complex methods of transformation may be of value, e. g., enzymatic demethylation of sulfonium compounds and biological transfer of atoms and atom groups in inorganic molecules to organic molecules. Of the various groups of compounds reviewed, the most promising seem to be the complex thioesters, specifically, certain aminoalkylthio-compounds containing groupings of thiosulfenic and thiosulfinic acids. Orig. art. has: 5 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: LS

NO REF SOV: 010

OTHER: 065

nl
Card 2/2

L 22781-66 EWT(m) JXT(RML)

ACC NR: AP6007762

SOURCE CODE: UR/0205/66/006/001/0093/0096

AUTHOR: Davydova, S. A.; Dorofeyev, V. M.; Yakovlev, V. G.

ORG: none

TITLE: The possibility of isolating radiation protection agents on the basis of the total quantity of Diche-positive compounds in urine

SOURCE: Radiobiologiya, v. 6, no. 1, 1966, 93-96

TOPIC TAGS: gamma irradiation, radiation protection, ionizing radiation

ABSTRACT: An attempt was made to establish a correlation between the biological protective effect and the capacity of protection agents to influence the production of Diche-positive compounds (DPC) in the urine of irradiated organisms. Earlier researchers noted a considerable DPC increase in the urine of irradiated animals and suggested that this reaction was a specific feature of radiation sickness; they also suggested that the reaction could be used to diagnose and isolate radiation protection agents. In order to check these theories, rats of both sexes were exposed to Co⁶⁰ gamma rays (700 rad), after having received protective doses of 1 of 24 preparations (sulfur-containing radiation protection agents, high molecular compounds, indole derivatives, and others). It was found that irradiation increased DPC production in the urine by 58% over the initial level. The authors conclude that the rise in the DPC level in

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UDC: 577. 391;628.58

L 22781-66

ACC NR: AP6007762

the urine of irradiated animals is not a feature specific to ionizing radiation and that the amount of DPC is not a reliable criterion for isolating radiation protection agents. The effect of the 24 preparations on DPC production in the irradiated rats is presented in tabular form. Orig. art. has: 3 tables. [14]

SUB CODE: 06/ SUBM DATE: 10Nov64/ ORIG REF: 013/ OTH REF: 004

ATD PRESS: 4129

Card

2/2

YAKOVLEV, V. I. (engr)

Dissertation: "An Efficient Electric Drive for Excavators." Cand Techn Sci, Moscow
Order of Lenin Power Engineering Institute imeni V. I. Molotov, 21 Jun 54. (Vechern-
yaya Moskva, Moscow, 11 Jun 54)

SO: SOE 318, 23 Dec 1954

YAKOVLEV, V. I.

AID P - 1454

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 5/36

Authors : Golovan, A. T., Doc. Tech. Sci., Prof.,
Yakovlev, V. I., and Lipatov, D. N., Kands. of Tech. Sci.,
Moscow

Title : Experimental analysis of electric drives of single-bucket
excavators

Periodical : Elektrichestvo, 2, 22-27, F 1955

Abstract : The Soviet construction industry employs a great number
of excavators with a bucket capacity from 0.25 up to
20 cu m. The Moscow Power Institute conducted a series of
experiments and studies in the years 1949-1954 in order to
determine the most expedient electric gear for excavators of
medium capacity. Three types of drives were studied: an
a-c drive with rheostat control, a d-c drive consisting of
a generator-motor with a complex field excitation, and
the same scheme with an amplidyne. The tests of excavators

AID P - 1454

Elektrichestvo, 2, 22-27, F 1955

Card 2/2 Pub. 27 - 5/36

employed in the construction of the Volga-Don Canal disclosed several deficiencies. The authors propose a series of improvements to be applied. 13 diagrams.

Institution: Moscow Power Institute im. Molotov

Submitted : N 29, 1954

YAKOVLEV, V. I.

AID P - 1482

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 33/36

Authors : M. G. Chilikin, A. T. Golovan, D. P. Morozov, A. S. Sandler,
M. M. Sokolov, V. I. Yakovlev

Title : Book review: I. V. Kharizomenov: Electrical Equipment
of Metal-Cutting Lathes: approved by the Ministry of
Higher Education of the USSR as a textbook for machine-
building Institutes of Higher Education. Mashgiz, 1952,
pp.309

Periodical: Elektrichestvo, 2, 85-86, F 1955

Abstract : The authors present the advantages and the defects of the
book as they were discussed at the meeting of the Chair
of Electrical Equipment of Industrial Enterprises of the
Moscow Power Engineering Institute im. Molotov.
Summarizing the discussion, the reviewers conclude that
the book cannot be considered as satisfying the requirements
for use as a textbook.

AID P - 1482

Elektrichestvo, 2, 85-86, F 1955

Card 2/2 Pub. 27 - 33/36

Institution: None

Submitted : No date

generator. Despite the increased number of machines, it enables the generator group to be made up of machines of normal type which is an advantage over the system with the triple-wound generator. A comparison of calculated results using a method proposed by the author and experimental data proves that the agreement between them is satisfactory. The results of the calculations show that the generator group with the normal type machines is more reliable and steady in operation. A comparison of the results of the calculations and experimental data shows that the generator group with the normal type machines is more reliable and steady in operation. The results of the calculations show that the generator group with the normal type machines is more reliable and steady in operation. The results of the calculations show that the generator group with the normal type machines is more reliable and steady in operation.

YAKOVLEV, V. I.

AUTHORS: Klyuchev, V. I., Candidate of Technical Sciences, 105-58-6-15/33
Yakovlev, V. I., Candidate of Technical Sciences

TITLE: Use of Magnetic Amplifiers for the Control of the Generator-Motor System in Electric Excavator Drives (Primeneniye magnitnykh usiliteley dlya upravleniya sistemoy generator -dvigatel' v elektroprivodakh ekskavatorov)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 59-63 (USSR)

ABSTRACT: In order to investigate the problem of the technical possibilities of an arrangement with a magnetic amplifier as generator exciter the technological requirements of the electric drive of an excavator are analyzed. The safeguard of the required time in the transient processes of starting, turning, and braking is most important for their favorable progress as well as the limiting of the electric-motor current during the transient processes. Because of the considerable electromagnetic inertia of the generator the guarantee of the required time by the transient processes is connected with the necessity of forcing their excitation. In the arrangement with one electrodynamic amplifier (EDA) and one magnetic intermediate amplifier (MIA) the generator excitation processes are

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Use of Magnetic Amplifiers for the Control of the Generator- 105-58-6-15/33
-Motor System in Electric Excavator Drives

forced by means of a rigid negative return coupling to the generator voltage and a limitation of current by the use of a negative connection to the armature current by cutting-off. This diagram excludes favorable characteristic properties for the electric drive of the turning. The character of the transient processes is not changed essentially by the substitution of the EDA-MIA cascade by a magnetic amplifier without changing the diagram and the return-coupling character. A diagram is shown here which renders the use of the magnetic amplifier for a direct control of the generator field in the excavator drives more expedient. The characteristic excavator properties of the electric drive are produced in this case by using the nonlinearity of the characteristic curve of the magnetic amplifier, the continuous current return coupling, and the positive voltage return coupling. In order to increase the reliability of the motor-current limitation the negative current connection is made by introducing the control winding circuit of the armature-current circuit into the current circuit. In this case the voltage drop of the control winding circuit is proportional to the armature current, and thus the number of control circuits and of control contacts is decreased, too. -From Sept-

Card 2/3

Use of Magnetic Amplifiers for the Control of the Generator- 105-58-6-15/33
-Motor System in Electric Excavator Drives

ember to October 1957 industrial tests of the electric drives were made in the Kounrad Mine at the excavator EKG-8 (E-6) according to the diagram with EDA and MIA and to that with a magnetic amplifier. The analysis of the oscillograms proves the correctness of the results in the comparison of the investigated diagrams and shows that the system with a magnetic power amplifier guarantees higher qualitative and quantitative indices. The tests were made with all the three basic electric drives of the excavator (turning, raising, pressing) and showed analogous results. The theoretical analysis and the test results of the arrangement generator-motor with a magnetic amplifier prove the great technical possibilities of this diagram. The simplicity of this diagram and the absence of any oscillation tendency essentially simplify the adjustment. There are 5 figures and 1 Soviet reference

ASSOCIATION: Moskovskiy energeticheskii institut (Moscow Institute of Power Engineering)

SUBMITTED: November 18, 1957

Card 3/3 1. Magnetic amplifiers--Performance 2. Motor generators--Control
3. Earth moving equipment--Control systems

8(5)

SOV/105-59-5-9/29

AUTHORS: Yakovlev, V. I., Docent, Candidate of Technical Sciences,
Sokolov, M. M., Docent, Candidate of Technical Sciences,
Terekhov, V. M., Candidate of Technical Sciences

TITLE: A Comparison of Several Electric-drive Systems for the Rock
Excavator EKG-8 (Sravneniye nekotorykh sistem elektroprivoda
skal'nogo ekskavatora EKG-8)

PERIODICAL: Elektrichestvo, 1959, Nr 5, pp 36-42 (USSR)

ABSTRACT: Some electric-drive systems for excavators of mean capacity are
compared here. The comparison is based on theoretical and ex-
perimental work carried out in the Moskovskiy energeticheskiy
institut (Moscow Power Engineering Institute), as well as on
industrial tests of two bucket dredges EKG-8 Nr 1, and Nr 3 of
the Ural'skiy zavod tyazhelogo mashinostroyeniya (Ural Heavy
Machinery Plant), which are in operation in the Kounradskiy
rudnik (Kounrad Mine). V. I. Klyuchev, Yu. D. Kapuntsov, G. Ye.
Samokhin, B. I. Aleksandrov, B. I. Popov, and K. A. Byurger
took part in this work.- Besides, the generator-motor system
with an electrodynamic and a magnetic amplifier now in opera-
tion (Fig 1a), electric drives with the wiring: generator-motor

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SOV/105-59-5-9/29

A Comparison of Several Electric-drive Systems for the Rock Excavator EKG-8

with a control exciter (Fig 1b), as well as with the wiring: generator-motor with a magnetic capacity amplifier (Fig 1w) were investigated.- A comparison of these drive systems showed the following facts: 1) It was found out theoretically and by experiment that the electric drive with the generator-motor wiring with an electrodynamic and a magnetic amplifier is too complicated and not very reliable. 2) The system given in figure 1b is, in many respects, better than the first in figure 1a. 3) The most advanced and technically most perfect system is the third wiring according to figure 1w. There are 6 figures and 6 Soviet references.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

SUBMITTED: January 5, 1959

Card 2/2

YAKOVLEV, VLADIMIR IVANOVICH, kand.tekhn.nauk, dotsent; KAPUNTSOV,
YURIY DMITRIYEVICH, inzh.

Industrial testing of the electric drives for medium-power
excavating machinery using a generator-motor circuit with controlled
excitation. Izv. vys. ucheb. zav.; elektromekh. 4 no.5:96-
105 '61. (MIRA 14:7)

1. Kafedra elektrooborudovaniya promyshlennykh predpriyatiy
Moskovskogo energeticheskogo instituta.
(Excavating machinery--Electric driving)

YAKOVLEV, V.I., kand.tekhn.nauk; KLYUCHEV, V.I., kand.tekhn.nauk;
KALASHNIKOV, Yu.T., inzh.; ALEKSANDROV, B.I., inzh.

Study of various electric drive networks for the Esh.6/60
dragline excavator. Elektrichestvo no. 7:34-39 J1 '63. (MIRA 16:9)

YAKOVLEV, V.I., kand. tekhn. nauk (Moskva); VUL', Yu.Ya., inzh. (Moskva);
TYUKOV, R.A., inzh. (Moskva)

Efficient system for regulating electric excavator drives. Elektri-
chestvo no.3:30-35 Mr '65. (MIRA 18:6)

~~YAKOVLEV, V.I.~~ YAKOVLEV, V.I.

SUBJECT
AUTHOR
TITLE
PERIODICAL

USSR / PHYSICS

CARD 1 / 2

PA - 1846

DOBEVOL'SKIY, S.P., NIKOL'SKIY, S.I., TUKIS, E.I., JAKOVLEV, V.I.
The Spatial Distribution of Broad Atmospheric Showers which are
caused by Primary Cosmic Radiation with Different Energies.
Zurn.eksp.i teor.fis, 31, fasc.6, 939-942 (1956)
Issued: 1 / 1957

In the summer of 1954 the authors carried out experiments for the broadening of the energy interval of the broad atmospheric showers under investigation. The spatial distribution of particles was investigated at an altitude of 3860 m above sea level in showers with a primary energy of less than $6 \cdot 10^{13}$ and more than 10^{15} eV. In order to be able to measure the great densities of the flows of particles with accuracy, groups of hodoscopic counters with a surface of 16 cm^2 each were used. The average spatial distribution of particles in showers with $1,2 \cdot 10^6$ particles is illustrated by a diagram. Difficulties arise when investigating showers with less than 10^4 particles because of the low number of particles. On the occasion of the passage of the showers investigated by the authors through the experimental system, discharges occurred in from 4 to 7 of 456 counters. The position of the axis in such showers was determined by means of a group of hodoscopic counters. In all showers investigated the ratio (total number of counters / number of counters recording the passage of a shower particle) was determined at given distances from the axis. The spatial distribution of the particles thus obtained is illustrated in form

✓
 Žurn.eksp.i teor.fis,31,fasc.6, 939-942 (1956) CARD 2 / 2 PA - 1846
 of a diagram. The experimental results obtained by JU.N.VAVILOV et al. (Dokl. Akad.Nauk, 93, 233 (1953)) agree well with the results obtained by this work. A further diagram illustrates the normalized spatial distribution of the particles in showers, which had been produced by primary particles with different energies. The expected modification of the shape of the function of the spatial distribution of the shower particles was not confirmed by experiment.

The experimental results obtained can be explained as follows: An abnormal high-energy nuclear-active particle present in the stem of the broad atmospheric shower with the primary energy of $< 10^{15}$ eV produces the electron-photon component with high energy in the depth of the atmosphere. This conclusion can be illustrated by comparison of the results obtained here on spatial distribution with the angular distribution of particles on the occasion of nucleon-nucleon interaction observed in photographic emulsions. The major part of the energy liberated on the occasion of primary interaction is carried off by the particles at an angle of $\sim 10^{-4}$ sterad.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the USSR.

1781
SPATIAL DISTRIBUTION OF THE PARTICLES OF EXTENSIVE AIR SHOWERS PRODUCED BY PRIMARY COSMIC RAY

Author: ...
Institute: ...
JETP 4, 1958, 80, 1958, 1958

The spatial distribution of charged particles in the central region of extensive air showers produced by primary cosmic ray particles of various energies was experimentally investigated. It has been found that, within the limits of experiment, the spatial distribution is independent of the energy of the primary particle producing the shower in the energy region of 10^{15} to 6×10^{16} eV (auth)

... ..

21(7)

SOV/56-35-5-44/56

AUTHORS: Murzina, Ye. A., Nikol'skiy, S. I., Yakovlev, V. I.

TITLE: The Observation of Nuclear-Active Particles of Cosmic Radiation With an Energy of $\geq 10^{13}$ eV (Nablyudeniye yaderno-aktivnykh chastits kosmicheskogo izlucheniya s energiyey $\geq 10^{13}$ eV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1298-1300 (USSR)

ABSTRACT: In the Fall of 1957 the current intensity of nuclear-active high-energy cosmic radiation particles was measured in an altitude of 3860 m above sea level. The detector of nuclear-active particles consisted of 7 ionization chambers which were surrounded by lead. The arrangement of the ionization chambers is shown by a schematical drawing. An analysis of measuring results shows the following: Nuclear-active particles having an energy of more than $2 \cdot 10^{12}$ eV are accompanied in 81 ± 3 cases by extensive atmospheric showers of more than $3 \cdot 10^3$ particles. In the case of $\geq 1.5 \cdot 10^{13}$ eV nuclear-active particles this percentage is $83 \pm 4\%$. Thus, the percentage of high-energy particles accompanied by showers depends only to a small extent on the energy of nuclear-active particles.

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SOV/56-35-5-44/56

The Observation of Nuclear-Active Particles of Cosmic Radiation With an Energy of $\geq 10^{13}$ eV

A diagram shows the integral energy spectrum of nuclear-active particles observed in an altitude of 3860 m above sea level. The energy spectrum may be represented in the form

$F(>E) \sim 1/E^{1.53 \pm 0.07}$ in the energy interval of between 10^{12} and 10^{13} eV, which is in agreement with the energy spectrum of the primary cosmic radiation of corresponding energy. Much fewer particles with $\geq 3 \cdot 10^{13}$ eV were, by the way, found than might have been expected. The authors thank Professor N. A. Dobrotin and G. T. Zatsepin for useful discussions of the results obtained. There are 2 figures and 3 references, 2 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

SUBMITTED: July 10, 1958

Card 2/2

YAKOVLEV, V. I.

31530
S/627/60/002/000/012/027
D299/D305

3.24/0(1559,2205,2705)

AUTHORS: Dovzhenko, O. I., Zatsepin, G. T., Murzina, Ye. A., Ni-
kol'skiy, S. I., and Yakovlev, V. I.

TITLE: Energy spectrum of nuclearactive component of cosmic ra-
diation at 3860 m, and related extensive air showers

SOURCE: International Conference on Cosmic Radiation. Moscow,
1959. Trudy. v. 2. Shirokiye Atmosfernyye livni i kas-
kadnyye protsessy, 144-151

TEXT: Two series of experiments are described, of 1955 and of
1957. The apparatus used in 1957 permitted detecting extensive air
showers exceeding 1000 particles only. The relation is established
between the nuclearactive particles and the ionization burata in
the chambers. Computations showed that if the integral energy-spec-
trum of the incident nuclearactive particles is expressed by the
power law $f(>E) = AE^{-\gamma}$, then the ionization spectrum is also de-
scribed by a power law with the same γ . The experimentally obtained

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S/627/60/002/000/012/027
D299/D305

Energy spectrum of ...

energy spectrum of the nuclearactive component is plotted in a figure. From the figure it is clear that the integral energy spectrum of nuclearactive particles in the range of 10^{12} to $5 \cdot 10^{13}$ ev., can be expressed in the form $f(>E) = AE^{-\gamma}$, where $\gamma = 1.5 \pm 0.1$. The absolute intensity of the nuclearactive particles with energy $>10^{12}$ ev. is $5.5 \pm 0.6 \text{ hour}^{-1} \text{ sterad}^{-1}$. By comparing the obtained intensity with the spectrum of the primary radiation and the number of low-energy nuclearactive particles at sea level, one obtains the absorption length for nuclearactive particles. In order to detect the air showers accompanying the nuclearactive particles, 15 cylindrical ionization chambers were used. The obtained integral number-spectrum is shown in a figure. It was found that the percentage of nuclearactive particles, accompanied by air showers, increases monotonically with the energy of the nuclearactive particles, varying between 76 and 88% for energies of $2 \cdot 10^{12}$ to $2.5 \cdot 10^{13}$ ev. The inter-

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Energy spectrum of ...

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S/627/60/002/000/012/027
D299/D305

action free-path was calculated by the change in the number of the recorded nuclearactive particles as a function of increasing thickness of the graphite layer above the ionization chamber. It was also found that the integral energy spectrum of nuclearactive particles can be expressed in the form $F(>E) \sim E^{-m}$, where $m = 0.9 \pm 0.2$. This formula apparently characterizes the spectrum of the nuclearactive component as a whole. Further, the energy spectra of nuclearactive components for showers of different total number of particles is determined, as well as for various distances from the shower axis. The procedure used for this purpose is described. The air showers under investigation were divided into 3 groups (according to total number of particles). A peculiar feature of the spectrum at distances of 0 to 1 m was the absence of nuclearactive particles with energies below 10^{11} ev. The integral spectra of nuclearactive particles for the 3 groups of showers are shown in a figure. The spectra are characterized by smooth shape even in the region where a shower contains 1 to 2 particles. By averaging, one obtains the

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Energy spectrum of ...

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D299/D305

energy spectrum $F(E) \sim E^{-0.9 \pm 0.1}$ for $2.5 \cdot 10^{10} < E < 10^{12}$ ev. The dependence of the number of nuclearactive particles on the total number of particles can be expressed as $N^{1.5}$ for the range $N < 10^5$. With $N < 10^5$, the dependence of the number of nuclearactive particles on N changes its character. The comparatively softer character of the energy spectrum of nuclearactive particles with $N > 10^5$ is in qualitative agreement with the results obtained from another series of experiments; it is also one more proof of the possible change in the character of elementary nuclear interaction with primary-particle energies $> 3 \cdot 10^{14}$ ev. There are 6 figures, 2 tables and 14 references: 12 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: M Kaplon, J. Klose, D. Ritson, W. Walker. Phys. Rev., 91, 1573, 1953.

Card 4/4

YAKOVLEV, V. I., MURZINA, Ye. A. and NIKOLSKIY, S. I.

"High Energy Nuclear-Active Particles and the Extensive Air
Showers Which Accompany Them"

Report presented at the International Conference on Cosmic Rays
and Earth Storms, 4-15 September 1961, Kyoto, Japan.

P. N. Lebedev Institute of Physics, Moscow, U.S.S.R.

9.9843

20h51
S/056/61/0h0/002/00h/0h7
B113/B21h

AUTHORS: Denisov, Ye. V., Zatsëpin, V. I., Nikol'skiy, S. I.,
Pomanskiy, A. A., Subbotin, B. V., Tukish, Ye. I.,
Yakovlev, V. I.

TITLE: Observation of nuclear-active particles and electron-photon
avalanches with energies greater than 10^{12} ev at a height of
3860 m above sea level

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40,
no. 2, 1961, 419-425

TEXT: The nuclear-active and electron-photon component of high-energy
cosmic radiation were studied to obtain additional data on the nature of
nuclear interaction at energies $\geq 10^{13}$ ev. The observations were made in
1959 on the Pamir. The detector consisted of four rows in ionization
chambers between which were placed lead and carbon, and over which were
10 hodoscope groups containing 12 counters (330 cm² each). Besides, two
cylindrical chambers were placed at a distance of 7 m from the middle of
this setup, a hodoscopic point and detector of the energy density of the

Card 1/3

Observation of nuclear-active...

20h51
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B113/B21h

electron-photon component were at a distance of 18 m from the center and served to study the fluctuations of the particle flux. If the axis of the extensive atmospheric shower hits the recording area of the detector, the number of particles in the shower may be determined from the formula $N = 1000 \epsilon$, where ϵ is the effective particle density of the particle flux per m^2 . Assuming that in every event, nucleons and pions impart 1/3 of their energy to the new resulting pions, the energy of the nuclear-active particles was found to be given by $E \sim 2.3 \cdot 10^8 N^{1.01} \text{ ev}$ which holds for the range $10^{11} \text{ ev} \leq E \leq 5 \cdot 10^{14} \text{ ev}$. In this energy range, the nuclear interaction cross section does not decrease with the increasing energy of the nucleons involved. From a comparison with the experimental data of other papers, the integral energy spectrum of the nuclear-active particles in the range $10^{12} \div 10^{13} \text{ ev}$ can be expressed in the form $f(E) \sim E^{-n}$, where $n = 1.57 \pm 0.1$. For energies of nuclear-active particles $< 10^{13} \text{ ev}$, the energy spectra are determined from the spectral form of the primary particles with the help of the mean free path for nucleon interaction and the value of the inelasticity coefficient. In the intermediate range, the

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20451

Observation of nuclear-active...

S/056/61/010/002/001/017
B113/R211

energy spectrum is not an exponential function, and is determined from the fluctuation in the number of collision events and in the value of the inelasticity coefficient, and also from the accuracy of energy measurement in each individual event of the recording of nuclear-active particles. Professors N. A. Dobrotin and G. T. Zatsepin are thanked for discussions; G. Ya. Goryacheva, G. V. Grishina, G. V. Minayeva, L. A. Miroshnichenko, A. M. Mozhayev, N. M. Nesterova, V. I. Sokolovskiy, and A. Ye. Subbotina are thanked for participation in the work. There are 4 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
(Institute of Physics imeni P. N. Lebedev, Academy of Sciences USSR)

SUBMITTED: July 12, 1960

Card 3/3

PANCHENKOV, G.M.; KOZLOV, L.L.; YAKOVLEV, V.I.; KATSOBASHVILI, V.Ya.;
VASIL'YEV, L.A.; RYABUKHIN, Yu.S.

Polymerization of amylenes under the action of high-energy
electrons. Izv. vys. ucheb. zav.; neft' i gaz 5 no.1:57-58
'62. (MIRA 16:11)

1. Moskovskiy institut neftekhimicheskoy i gazovoy
promyshlennosti imeni akademika I.M. Gubkina.

S/048/62/026/005/017/022
B108/B102

3,2410

AUTHORS: Nikol'skiy, S. I., Murzina, Ye. A., Tukish, Ye. I., and
Yakovlev, V. I.

TITLE: Nuclear-active particles and high-energy electron-photon
avalanches in extensive atmospheric showers of cosmic-ray
particles

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
no. 5, 1962, 668-673

TEXT: An ionization chamber and a counter device with a surface area of
 25 m^2 were used to measure the total number and energy of shower particles. ✓ B
The errors in measurement varied from 20 to 40%. The energy of electron-
photon showers induced by photons of $10^{10} - 10^{12}$ ev is proportional to the
number N of particles. In the present case, it was determined from the
ionization under 10 radiation units of lead: $E = 1.2 \cdot 10^8 N$ ev. The nuclear-
active component was recorded by ionization chambers under a graphite
layer (210 g/cm^2) which caused the nuclear-active particles to impart most
Card 1/3

Nuclear-active particles and...

S/048/62/026/005/017/022
B108/B102

of their energy to the electron-photon component. It is established that the total number of shower particles cannot be determined unambiguously from energy measurements of the electron-photon component in an extensive atmospheric shower of high-energy particles. Discrepancies between experimental and calculated shower spectra are due to nuclear-active particles falling upon the detector. There are 7 figures. 1
B

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva Akademii nauk SSSR
(Institute of Physics imeni P. N. Lebedev of the Academy of
Sciences USSR)

Card 2/3

Nuclear-active particles and...

S/048/62/026/005/017/022
B108/B102

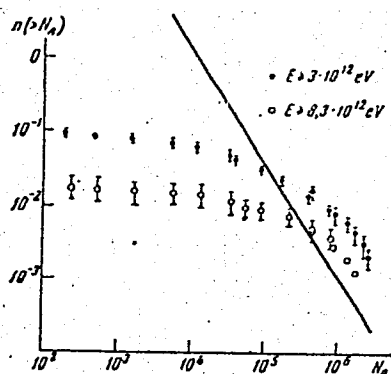


Fig. 4.

Fig. 4. Integral spectrum of extensive showers induced by nuclear-active particles. Straight line: shower spectrum without registration of high-energy nuclear-active particles.

Card 3/3

V. I. YAKOVLEV

Energy spectrum on nuclear active particles at Mountain altitude

report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur, India,
2-14 Dec 1963

универс., т. 1.
AID Nr. 992-4 18 June

PULSE REGISTERING FROM LARGE NUMBER OF IONIZATION CHAMBERS
(USSR)

Sokolovskiy, V. I., B. V. Subbotin, and V. I. Yakovlev. Pribory i tekhnika
eksperimenta, no. 2, Mar-Apr 1963, 86-89. S/120/63/000/002/020/041

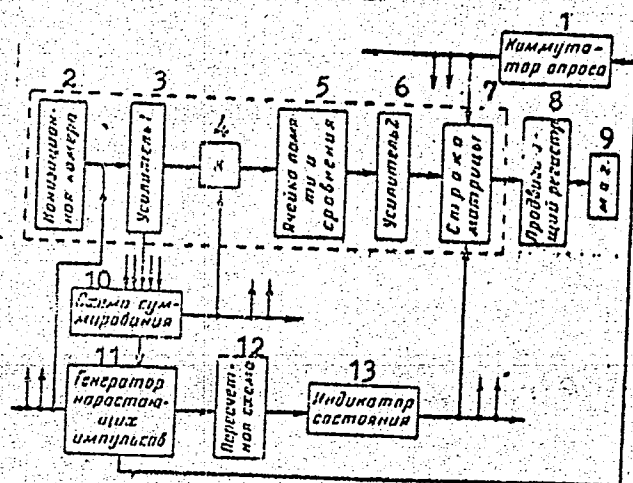
An assembly for simultaneous registration of pulses originating in some
1500 ionization chambers of two ionization calorimeters was developed at the

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15 June

PULSE REGISTERING [Cont'd]

S/120/63/000/002/020/041



1 - interrogation commutator; 2 - ionization chamber; 3 - amplifier 1; 4 - switch (key); 5 - memory and comparison unit; 6 - amplifier 2; 7 - matrix row; 8 - shift register; 9 - magnetic tape recorder; 10 - addition network; 11 - building-up-pulse generator; 12 - conversion unit; 13 - condition indicator.

Card 2/4

AID Nr. 992-4 18 June

S/120/63/000/002/020/041

PULSE REGISTERING [Cont'd]

Physics Institute of the Academy of Sciences USSR. The block diagram of the assembly is shown in the illustration. A negative pulse formed in an ionization chamber is applied to amplifier 1. From the first stage of the latter it proceeds, simultaneously with pulses coming from other channels, to the addition network, where a control signal is produced. From amplifier 1 the pulse proceeds through the switch to the memory and comparison unit, where it is accumulated. A series of 103 pulses is then produced by the generator of building-up pulses, which are led into amplifier 1 and then through the switch to the memory and comparison unit, where they are compared with the pulses already accumulated. The first of the building-up pulses that surpasses the amplitude of the accumulated signal is amplified by amplifier 2 and let into the corresponding matrix row. A scaling unit utilizing the binary number system is employed for counting the generator pulses. The vertical matrix columns are connected to the conversion unit by the condition indicators. Thus, each matrix row memorizes the number of the generator pulse, the amplitude of which is equal to the pulse registered by a given

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PULSE REGISTERING [Cont'd]

S/120/63/000/002/020/041

channel. The last of the generator pulses switches on the interrogation commutator, which transcribes the row indications on the shift register. The data recorded on magnetic tape are then processed by electronic computer. The advantages of the system can be listed as follows: 1) broad dynamic range, reaching $2 \cdot 10^4$ (50 μ v — 1.0 v); 2) low error in determining amplitude of registered pulses, equal to $\pm 5\%$ of the entire range; 3) high reliability of measurement; 4) possibility of simultaneously checking the entire multichannel system from the glow of neon lamps alone, without using instruments; 5) elimination of the necessity of adjusting separate channels; 6) possibility of processing the results by means of computers as well as by conventional methods (matrix photographs); and 7) economy of the recording system (the power consumption of a single channel is 15 w).

[KM]

Card 4/4

YAKOVLEV, V.I. (Novosibirsk)

Interaction between an expanding plasma filament and an
external magnetic field. PMTF no. 68141-143 N-D '63.
(MIRA 1787)

PANCHENKOV, G.M.; YAKOVLEV, V.I.; KOSILOV, A.I.; ZHURAVLEV, G.I.

Radiation-thermal cracking of oil fractions. Izudy khimicheskoy fiziki
no.44:210-213 '63. (MIRA 18:5)

ACCESSION NR: AP4033123

S/0120/64/000/002/0109/0111

AUTHOR: Subbotin, V. B.; Yakovlev, V. I.

TITLE: Cold-cathode-tube switch with a wide range of switching speeds

SOURCE: Pribery* i tekhnika eksperimenta, ⁹no. 2, 1964, 109-111

TOPIC TAGS: switch, electronic switch, multichannel switch, cold cathode tube, MKhT-90Ts cold cathode tube

ABSTRACT: A multichannel MKhT-90Ts-tube switch with an adjustable switching speed of 0-30 kc is briefly described. The switch can provide an unlimited number of outputs with an output-pulse height of over 50 v. Its basic circuit is shown in Fig. 1 of the Enclosure. In connecting the switch to a low-impedance load, a pulse-forming circuit whose circuit diagram is supplied is recommended. Orig. art. has: 3 figures.

Card 1/3

ACCESSION R: AP4033123

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 29 Apr 63

ENCL: 01

SUB CODE: EC

NO REF SOV: 004

OTHER: 000

Card 2/3

ACCESSION NR: AP4033123

ENCLOSURE: 01

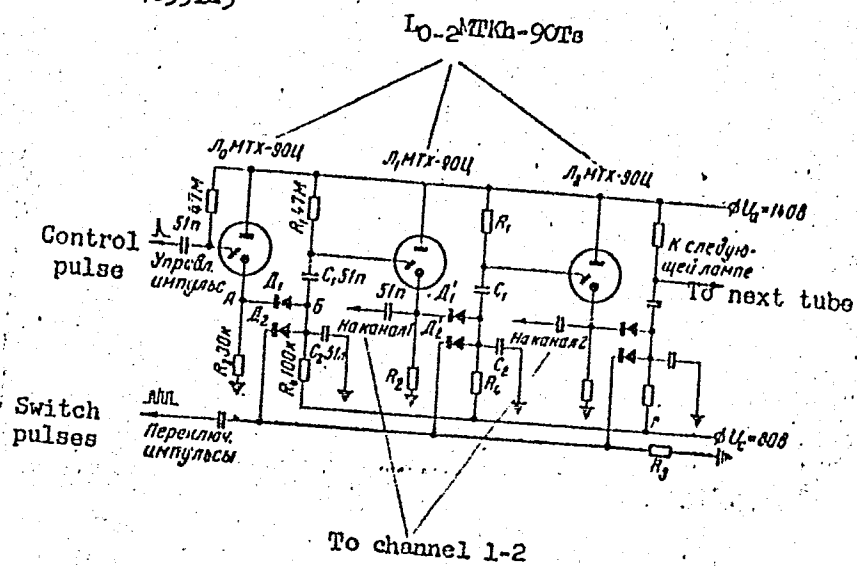


Fig. 1. Cold-cathode-tube high-speed switch

Card 3/3

L 50697-65 EWO(j)/EWI(m)/EPF(c)/EPF(n)-2/ENP(j)/T/ENA(h)/EWA(l) G/RM

ACCESSION NR: AR5018412

UR/0081/65/000/011/L032/L032 33
B

SOURCE: Ref. zh. Khimiya, Abs. 11L216

AUTHOR: ⁴⁴Panchenkov, G. M.; ⁴⁴Kuzovkin, D. A.; ⁴⁴Kozlov, L. L.; ⁴⁴Yakovlev, V. I.; et al.

TITLE: Activation of alumosilicate catalysts by high energy radiation

CITED SOURCE: Sb. Nauchn. osnovy podbora i proiz-va katalizatorov. Novosibirsk, Sib. otd. AN SSSR, 1964, 376-378 19

TOPIC TAGS: catalyst, high energy radiation, gamma ray, proton

TRANSLATION: The effect of preliminary irradiation of an alumosilicate catalyst of the Baku and Salavata plants by gamma rays and protons was studied with respect to its catalytic activity in the cracking of cumene and the polymerization of isoamylenes. The radiation sources were the EG-2.5 proton accelerator and the K-18000 gamma unit. The irradiation of an alumosilicate catalyst by protons and gamma rays increases its activity. The irradiated alumosilicate catalyst preserves its stability after repeated regenerations at 500-550°. As the radiation dose increases, the catalytic activity of the irradiated catalysts increases. N. Sh.

SUB CODE: GC, NP

ENCL: 00

Card 1/1 jlk

YAKOVLEV, V.I.

Energy spectra of nuclear-active particles at mountain level.
Izv. AN SSSR. Ser. fiz. 28 no.11. 1812-1814 N '64.

(MIRA 17:12)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.

VAVILOV, Yu.N.; DZHENIS, O.I.; NESTEROVA, H.D.; NIKOL'SKIY, S.I.;
POMANSKIY, A.A.; TURISH, Ye.I.; YAKOVLEV, V.I.

Extensive air showers of cosmic rays. Trudy Fiz. Inst. 26:
17-117 '64. (MIRA 17:10)

MIKHINA, Ye.A.; MIKHILICH, S.I.; YAKOVLEV, V.I.

Nuclear-active high-energy particles and extensive air showers in
the depths of the atmosphere. Izv. AN SSSR.Ser.Fiz. 29 no.10:1949-
1952. O 165. (MIRA 18:10)

USSR.

Sulfonation and amidation of sulfo derivatives in the thiophene series. V. I. Yakovlev and N. I. Putokhin (V. V. Kulbyshev Inst., Kuzbyshev). *Doklady Akad. Nauk S.S.S.R.* 96, 539-40 (1951). To 8.5 g $\text{C}_6\text{H}_5\text{SO}_3\text{H}$ at 3-6° was added 2.1 g of a suspension of 2 thiophenamine HCl salt and SnCl_4 and the mixture was heated 1.5-2 hrs. at 60-70°, cooled to 10° and poured on ice, yielding the crude $\text{C}_6\text{H}_4(\text{SO}_3\text{H})_2$ which could not be crystallized. This with K_2CO_3 gave after 2-hr. stirring and evaporation on a steam bath, followed by soln. in MeOH and drying, 0.9 g, 60% $\text{AcNH}(\text{C}_6\text{H}_4)_2\text{SO}_3\text{NH}_2$. This (1.4 g.) heated 0.5 hr. with 14 ml. 18.4% H_2SO_4 , freed of AcOH by distillation, cooled and neutralized with NH_4OH , gave, on evaporation and pptn. from MeOH by means of Et_2O , 1.1 g. $\text{C}_6\text{H}_4(\text{SO}_3\text{NH}_2)_2$, a cream-colored powder. This (0.4 g.) diazotized conventionally in dil. HCl and added to cold soln. of thiophenamine- SnCl_4 salt in dil. HCl, gave 55% $\text{H}_2\text{N}(\text{SO}_3\text{C}_6\text{H}_4)_2\text{N}(\text{C}_6\text{H}_4)_2\text{SO}_3\text{NH}_2$. I was also prepd. by acetylation of phenylazothiophenamine HCl salt, sulfonation with $\text{C}_6\text{H}_5\text{SO}_3\text{H}$, amidation of the product and hydrolysis of the Ac group. In this case was formed in 50% yield and is not described further. Coupling diazotized sulfanilamide with the double salt thiophenamine and SnCl_4 gave 50-55% $\text{H}_2\text{N}(\text{SO}_3\text{C}_6\text{H}_4)_2\text{N}(\text{C}_6\text{H}_4)_2\text{SO}_3\text{NH}_2$. This is described as 2-thiophenamine-5-iso-p-sulfanilamide HCl salt. G. M. Kozlovskii.

YAKOVLEV, V. I.

USSR/ Chemistry - Diazotization dyes

Card 1/1 : Pub. 22 - 23/44

Authors : Putokhin, N. I., and Yakovlev, V. I.

Title : Diazotization reaction of 2-thienylamine and azo-compounds of the thiophene series

Periodical : Dok. AN SSSR 98/1, 89-91, Sep 1, 1954

Abstract : The reaction products obtained from diazotization of 2-thienylamine and azo-compounds of the thiophene series and their chemical properties, are described. The purity of the reaction products (azo-dyes) was determined by reducing with titanium trichloride, quantitative determination of S, molecular weight and homogeneity of their crystals. It was found that mono- and disazo-dyes of the thiophene series are well qualified as dye pigment for woolens and silks.

Institution : The V. V. Kuybyshev Industrial Institute, Kuybyshev

Presented by : Academician S. I. Mironov, April 27, 1954

[illegible]

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961920011-1



APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961920011-1"

Y. KAVLEY, V. L.

either component. The mixture was heated, repeating the heating and slow cooling 2 or 3 times. At the eutectic m.p. the α phase crystallized down to 0% $C_{10}H_8N_2$, and the β phase on the $(C_6H_5)_3N$ side down to 5% $C_{10}H_8$. The eutectic mixt. contains 47 mol. % naphthalene (38.4 wt. %); the eutectic m.p. is 41.3° . The eutectic phase is a mixt., not of the 2 components, but of the α and β solid solns.

W. M. Sternberg

30690
S/152/61/000/012/002/002
B126/B101

// 01/30
AUTHORS:

Panchenkov, G. M., Yakovlev, V. I., Kozlov, L. L., Zhuravlev, G. I., Gol'din, V. A., Ryabukhin, Yu. S.

TITLE:

Radiation thermal cracking of gas-oil from Romashki petroleum

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 12, 1961, 99 - 101

TEXT: The effect of gamma radiation on the cracking of gas-oil, F. B. P. 300 - 345°C, from Romashki petroleum has been studied. For the experiments a gamma unit, K-18000 (K-18000), was used, and the dose was maintained constant at 100 r/sec.; the temperatures were 400 and 425°C, the maximum dose was 5 Mr, and the experiment took 14 hr. It was established that Co⁶⁰ gamma rays intensifies the cracking process considerably, and that the feed is converted twice as rapidly as in thermal cracking. The yield of the lightest fraction, I. B. P 200°C, exceeds that of all other fractions from a dose of 3.5 Mr upward and reaches 30 to 35% of the feed at a dose of 5 Mr. However, the olefin content of this fraction is lower than that of the corresponding fraction in thermal cracking. There are 6 figures and Card 1/2

30690

Radiation thermal cracking of gas-oil ...

S/152/61/000/012/002/002
B126/B101

5 references: 3 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Lucchesi P. J., Tarmy B. L., Long R. B., Baeder D. L., Longwell J. P., "Ind. Eng. Chem". 50 no. 6, 876, 1958; Pat. USA no. 2516848, 1950. ✓

ASSOCIATION: Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. I. M. Gubkina (Moscow Institute of the Petrochemical and Gas Industry imeni Academician I. M. Gubkin)

SUBMITTED: August 14, 1961

Card 2/2

KHANIN, I.M.; KARTSYNEL'M.B.; YAKOVLEV, V.I.; PORTYENKO, V.A.; BONDARENKO, I.P.

Intensification of the process of benzene recovery. Koks i khim.
no.9:40-43 '62. (MIRA 16:10)

1. Dnepropetrovskiy khimiko-tekhnologicheskoy institut (for Khanin, Kartsynel', Yakovlev).
2. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy koksokhimicheskoy promyshlennosti (for Portyenko).
3. Zhdanovskiy koksokhimicheskoy zavod (for Bondarenko).
(Shrubber (Chemical technology))
(Benzene)
(Coke industry---By-products)

S/672/62/000/011/001/011
D403/D307

AUTHORS: Proskuryakov, V. A., Yakovlev, V. I. and Kurdyukov, O. I.

TITLE: Oxidation of oil shales with aerial oxygen

SOURCE: Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut pererabotki i ispol'zovaniya topliva. Trudy, no. 11, 1962. Khimiya i tekhnologiya topliva i produktov yego pererabotki, 20-27

TEXT: The oxidation of a shale ex the Obshchiy Syrt deposit (containing 4.8% moisture, 21.6% of incombustible material, at least 2.06% CO₂, 8.4% of total S, 63.3% C, and 8.02% H) was studied in an aqueous alkaline suspension, under a pressure of 50 atm, between 75 and 200°C. The oxidation proceeds rapidly: 83% of kerogen is oxidized at 75°C, and 100% at higher temperatures. The yields of: (1) CO₂ increase from ~33% at 75 to 94.8% at 200°C, (2) higher acids decrease from ~57% at 75 to 4.2% at 200°C, (3) dibasic acid esters increase from 13% at 75 to 41.5% at 200°C, (4) H₂SO₄ increase

Card 1/2

Oxidation of oil...

S/672/62/000/011/001/011
D403/D307

from ~10% at 75 to ~30% at 200°C, (5) butanol increase from ~27% at 75°C to a maximum of ~30% at 110°C and fall to ~12% at 200°C, (6) volatile acids increase from ~3% at 75 to ~10% at 200°C; the above values are for every 100 g of kerogen oxidized. The sulfur originally present in the shale is thus practically fully oxidized to sulfate. Studies of the oxidation at 100°C and pressures of 50 and 30 atm showed that only 61% of the kerogen was oxidized at the lower pressure. Aerial oxidation may, however, be conducted, with greater efficiency, in a special tower, with continuous supply of air, at 175°C and 15 atm. Under these conditions more of the valuable products is obtained and the losses of kerogen carbon (as CO₂) are decreased. There are 3 figures and 4 tables.

Card 2/2

PANCHENKOV, G.M.; YAKOVLEV, V.I.; KOZLOV, L.L.; ZHOROV, Yu.M.; KUZOVKIN, D.A.

Activation of an aluminosilicate catalyst by protons and gamma rays of Co^{60} . Zhur.fiz.khim. 36 no.5:1113 My '62. (MIRA 15:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti.
(Aluminosilicates) (Catalysis) (Radiation)

ACCESSION NR: AT4008703

S/2982/63/000/044/0210/0213

AUTHOR: Panchenkov, G. M.; Yakovlev, V. I.; Kozlov, L. L.; Zhuravlev, G. I.

TITLE: Radiation thermal cracking of petroleum fractions

SOURCE: Moscow. Institut neftekhimicheskoy i gazovoy promyshlennosti. Trudy, no. 44, 1963. Neftekhimiya, pererabotka nefi i gaza, 210-213

TOPIC TAGS: cracking, petroleum product cracking, thermal cracking, radiation cracking, radiation thermal cracking, gamma irradiation, gas oil radiation cracking, petroleum product irradiation, gasoline fraction irradiation, petroleum refining, petroleum cracking, radiation cracking

ABSTRACT: Gas oil from Romashkinskaya petroleum (fraction 300-345C) was irradiated (100 r/sec) at temperatures of 400 and 425C. Another series of experiments employed the 350-500C fraction of the same petroleum, a radiation dosage of 92 r/sec and temperatures of 375 and 390C. The designations "RTC" and "HC" are used here to indicate heat cracking processes with and without the use of radiation, respectively. The authors found that radiation accelerates the decomposition of the original gas oil by 50 to 100% (see Figs. 1 and 4 in the Enclosure). The yield of gasoline fractions showed preferable patterns for the 300-345C fraction at 425C and radiation levels above 3500 r, as well as for the other fraction at 390C and

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ACCESSION NR: AT4008703

levels above 3000 r (see Figs. 2 and 3 in the Enclosure). The content of olefins in gasoline fractions is lower for RTC than in corresponding fractions for HC. Orig. art. has: 4 graphs.

ASSOCIATION: INSTITUT NEFTEKHIMICHESKOY I GAZOVOY PROMYSHLENNOSTI, MOSCOW
(Institute for petroleum chemistry and the gas industry)

SUBMITTED: 00

DATE ACQ: 16Jan64

ENCL: 04

SUB CODE: FL

NO REF SOV: 006

OTHER: 002

Card 2/02

PROSKURYAKOV, V.A.; YAKOVLEV, V.I.; POTEKHIN, V.M.

Oxidizing oil shales with atmospheric oxygen. Trudy VNIIT
no.12:11-15 '63. (MIRA 18:11)

YAKOVLEV, V. and GORLOV, O.

"On the Road Toward the Conquest of Cosmic Space," Pravda, 4 Nov 1957.
(Na Puti k zavoyevaniyu kosmicheskogo prostranstva)

The article furnishes information on dog preconditioning for flights to an altitude up to 100 mi.; also on equipment used and problems already solved or to be solved. Dog flights aboard satellites are expected to provide data for man's flights in space.

Trans - 1146773, 2 Dec 57

YAKOVLEV, V.

PHASE I BOOK EXPLOITATION

338

Vtoroy sovetskiy iskusstvennyy sputnik Zemli; materialy, opublikovannyye v gazete "Pravda" (The Second Soviet Artificial Earth Satellite; Material Published in "Pravda") Moscow, Izd-vo "Pravda", 1957. 47 p. 100,000 copies printed.

PURPOSE: The booklet was written to give the public information on the second artificial earth satellite.

COVERAGE: The book consists of a number of articles on the second sputnik originally published in the Moscow newspaper "Pravda". Basic information on orbit, structure, equipment, performance, and utilization of the sputniks is given. All these data have been repeatedly published elsewhere; therefore, only a few figures are arbitrarily singled out here. The total weight of the scientific apparatus, test animal, and power supply sources of the second sputnik was 508.3 kg. The initial orbital velocity was about 8,000 m per second. The second sputnik circled

Card 1/4

The Second Soviet Artificial Earth Satellite (Cont.)

338

the earth initially in 103.7 minutes. Its radio transmitters operated on frequencies of 40.002 and 20.005 megacycles, etc. The last article quotes admiring comments of American, British, French, and Chinese scientists, statesmen, and journalists. The book contains 8 figures.

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The Second Soviet Artificial Earth Satellite (Cont.)

338

Study of biological phenomena under space flight conditions

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On the Observation of Artificial Earth Satellites ("Pravda", Nov. 11, 1957)

24

The Upper Atmosphere and Its Investigation with the Aid of an Artificial Earth Satellite, by V.I. Krasovskiy, Doctor of Physical and Mathematical Sciences ("Pravda", Oct. 10, 1957)

25

Investigations of the Magnetic Pole of the Earth With the Aid of the Sputniks, by S. Dolginov, N. Pushkov, Candidates of Physical and Mathematical Sciences ("Pravda", Oct. 22, 1957)

29

On the Way to the Conquest of Cosmic Space, by O. Gorlov, V. Yakovlev ("Pravda", Nov. 4, 1957)

Biological investigations of flights in the upper layer of the atmosphere

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Penetrating the Secrets of the Universe (2 figures), by S.N. Vernov, Corresponding Member, Academy of Sciences, USSR ("Pravda", Nov. 18, 1957)	38
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Conversation of the Two Sputniks. Chinese Poem by Go Mo-zho, President of the Academy of Sciences of the People's Republic of China, translated by V. Derzhavin ("Pravda", Nov. 16, 1957)	45
Around the Earth and Around the Sputniks, by G. Rassadin ("Pravda", Nov. 17, 1957)	46

AVAILABLE: Library of Congress

Card 4/4

Yakovlev, V.I.

29(0)

Aviatsiya nauk SSSR

FRASE I BOOK EXPLOITATION

207/1658

Izvestiya Sputnika, Vp. 1: Resul'taty nauchnykh issledovaniy, provedenykh po programme KOD pri pomoshchi pervogo i vtorogo iskusstvennykh spутnikov (Artificial Earth Satellites, Pt. 1: Results of Scientific Studies Carried Out in Accordance With the KOD Program by Means of the First and Second Artificial Earth Satellites) Moscow, Izd-vo AN SSSR, 1958. 57 p. 3,500 copies printed. [Microfilm and Xerox Copy]

Rep. Ed.: L.V. Kurnosova; Ed. of Publishing House: D.M. Alekseyev; Tech. Ed.: I.V. Polyakova.

PURPOSE: This collection of articles is the first in a series to be published regularly and is intended to disseminate to the scientific community data collected in investigations performed by means of artificial earth satellites.

COVERAGE: This collection includes papers covering scientific data obtained from the first and second Soviet artificial earth satellites, including the areas reported on are measurements of cosmic radiation, atmospheric density, electron concentration in the ionosphere, and biological studies of an animal occupant of a satellite. Papers on the actions and perturbations of satellite orbits and optical and Doppler methods of satellite tracking are also included. The age of the individual articles is given in the Table of Contents.

Chernov, V.M., and V.I. Yakovlev. Scientific Studies of the Flight of an Animal in an Artificial Satellite

This paper discusses the experiment in which the dog "Layka" was placed into satellite orbit in Sputnik II. It describes the animal's behavior in the satellite cabin, the training of test animals, and the telemetered results obtained during the flight, and the conclusions derived from them.

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2

YAKOVLEV, V.I.

17(11).

PHASE I BOOK EXPLOITATION

SOV/1287

Bakh, Igor' Sergeyevich, Oleg Georgiyevich Gorlov, Yevgeniy Mikhaylovich Yugov, and Vladimir Ivanovich Yakovlev

Chelovek v kosmose; mediko-biologicheskiye problemy kosmicheskikh poletov
(Man in Space; Medical and Biological Problems of Space Flight)
Moscow, Izd-vo "Znaniye," 1958. 48 p. (Series: Vsesoyuznoye
obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.
Seriya VIII, 1958; vyp. I, no. 20) 45,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu
politicheskikh i nauchnykh znaniy.

Ed.: Benyumov, O.M.; Tech. Ed.: Berlov, A.P.

PURPOSE: This booklet is written for the general reader interested
in the problems of space flight.

COVERAGE: The book contains a brief description of the conditions
which might be encountered in space flight from medical and bio-
logical points of view. It describes the problems connected with

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